Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	**MM Docket No. 87-268**
and Their Impact Upon the	)	
Existing Television Broadcast Service	)	

To: The Commission

REQUEST TO ACCEPT LATE-FILED COMMENTS

A.C. NIELSEN COMPANY ("Nielsen"), through its attorneys, hereby requests the Federal Communications Commission (the "Commission") to accept the attached late-filed Comments on the Commission's *Fifth Further Notice of Proposed Rule Making* (the "Notice") released in the above-referenced proceeding on May 20, 1996.

Comments in this proceeding were due July 11, 1996. Nielsen is filing its Comments late but requests that the Commission accept them in the interest of a complete public record. Nielsen has been an active participant in the Commission's proceedings to implement Advanced Television Systems. It is in the public interest to include Nielsen's Comments on the current Notice because of the important role Nielsen plays in the television industry.

None of the parties interested in this proceeding will be prejudiced by this late submission. The deadline for filing Reply Comments is August 12, 1996. Accordingly, interested parties will have ample time to review Nielsen's Comments and respond to them.

For the foregoing reasons, it is respectfully requested that the Commission accept the attached Comments of A.C. Nielsen Company.

Respectfully Submitted,

A.C. NIELSEN COMPANY

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July 15, 1996

Before the

FEDERAL COMMUNICATIONS COMMISSION

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In the Matter of	)	
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Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service	)	**MM Docket No. 87-268**

TO: The Commission

COMMENTS OF A.C. NIELSEN COMPANY

A.C. NIELSEN COMPANY ("Nielsen"), through its attorneys, hereby provides its Comments on some of the issues raised in the Federal Communications Commission's ("FCC" or "Commission") *Fifth Further Notice of Proposed Rule Making* (the "*Notice*") released in the above-referenced proceeding on May 20, 1996. In support of these Comments, Nielsen states as follows:

I. BACKGROUND: THE NIELSEN "RATINGS"

1. Nielsen provides a variety of "rating" or audience measurement services to members of the advertising, broadcast and cable industries. The most commonly known of these services is Nielsen's "national" broadcast ratings, whereby Nielsen estimates the size and demographic composition of audiences viewing nationally-televised, analogically-transmitted, network and syndicated and cable network programs. In addition, Nielsen provides advertising tracking services, whereby Nielsen tracks the distribution of specified advertisements within programs.

2. Nielsen's national ratings of analog programming historically are compiled from three principal sources of information, each of which must be extremely reliable. These are: (i)

"Tuning" Information, revealing the radio frequency channel to which monitored television receivers in Nielsen Metered Households ("NMHs") are tuned at the specified time, which Nielsen obtains from "meters" connected to the television receivers located in those NMHs; (ii) "Program Line-Up" Information, revealing the network or syndicated program being transmitted in an analog mode by the broadcast station transmitting the channels being viewed in the NMH at the specified time, which Nielsen obtains from its Automated Measurement of Line-up ("AMOL") System; and (iii) Demographic Information, revealing the age and gender of the persons watching the television receiver at the specified time, which Nielsen obtains from "People Meters" located in the NMHs.

3. Nielsen's AMOL System provides Nielsen with Program Line-Up Information for analog programs by imbedding Source Identification ("SID") Codes on Lines 20 or 22 of nationally distributed, advertiser-supported, analog broadcast programs at the time of their origination. The SID Codes are unique to each program and identify the program's originating source and the date and time of the program's origination. Nielsen's enhanced AMOL System is also capable of embedding separate identifying information for each link in a program's distribution chain -- information which is increasingly being demanded by the advertising and programming industries to track the distribution and viewing levels of rated programs. Once embedded, Nielsen's SID Codes are delivered with the program throughout its distribution, eventually to local broadcast stations (whether network affiliates or independents) and cable systems (where these systems carry encoded programming) and, eventually, into viewers' homes. Nielsen's SID Codes cannot be seen by viewers because the Codes are transmitted within the "overscan" area of the television picture. Nevertheless, while they are invisible to viewers, the Codes are able to be decoded and "read" by Nielsen at central sites in each television market throughout the country for the purpose of verifying the broadcast of a

program and to prepare Nielsen's "ratings," or a quantification of the number and demographic characteristics of viewers watching a rated program at a specific time.

4. The transmission of Nielsen's SID Codes over broadcast frequencies has been consistently authorized by the FCC for over 26 years. The Commission first authorized the use of the vertical blanking interval ("VBI") to carry source identification codes in 1970, when it determined that the transmission of SID Codes served an "important service . . . without which [a station's] viable operation . . would be impossible."[1/] In 1981, the Commission authorized the transmission of Nielsen's SID codes on Line 20 of the VBI, having previously found that the "recovery of SID signal is accurate and extremely reliable," and that the record established that "there is virtually no potential for program degradation by the proposed SID transmissions."[2/] In 1989, the Commission further authorized the transmission of Nielsen's AMOL codes on Line 22 of the Active Video Signal, noting that the codes were an "integral part of the associated program" and that ratings were "of interest to virtually every broadcaster," and that Nielsen's use of Line 22 "will not visibly degrade the picture presented to viewers."[3/] Finally, in its June 28, 1996 *Report and Order* in the Digital Data Transmission Proceeding[4],/ the Commission granted Nielsen "permanent" authority to transmit its AMOL codes on Line 22 of the active television signal, finding that Nielsen's many years of "successful and problem-free operation" of its AMOL system "verifies the inherently innocuous nature" of Nielsen's use of the radio spectrum for this purpose.[5/]

1/ *In the Matter of Amendment of Part 73, Section 73.682(a) of the Commission's Rules*, Dkt. No. 18605, *Report and Order*, 22 F.C.C.2d 536, 545 (1970).

2/ *Notice of Proposed Rule Making and Memorandum Opinion and Order*, BC Dkt. 78-308, 43 Fed. Reg. 49331, 49332 (October 23, 1978); *and see Public Notice*, FCC 70-387, 22 F.C.C.2d 779, 780 (1970).

3/ Letter from Roy J. Stewart, Chief, Mass Media Bureau, to Grier C. Raclin (November 22, 1989) (the "Nielsen Authorization").

4/ *In re: Digital Data Transmissions Within the Video Portion of Television Broadcast Station Transmissions*, *Report and Order* (MM Doc. No. 95-42) (released June 28, 1996).

5/ *Id.* at ¶11.

5. These Comments are being filed to request that the Rules adopted in this proceeding to govern the transmission of digital broadcast programs take into account the technical steps necessary to prepare ratings for programs transmitted in a digital environment.[6/]

II. THE DTV STANDARD MUST INCLUDE PROGRAM IDENTIFICATION FEATURES

A. The Importance of Ratings

6. Nielsen's ratings are important foundations of the advertiser-supported broadcast and cable program industries, both of which utilize ratings to judge the viewing levels of broadcast and cable program offerings among viewers and to establish audiences "delivered" to the advertiser through their viewing of the program and advertisements. Advertisers use Nielsen's services to allocate their advertising expenditures; producers of broadcast and cable programming (virtually every major cable program provider is a subscriber to Nielsen's ratings) use ratings to evaluate the viewing levels of programs when making creative programming decisions; even the Commission itself relies upon Nielsen's ratings in connection with, *inter alia*, the enforcement of the FCC's Rules and Regulations.[7/]

7. Congress has recognized that maintaining and promoting our system of advertiser-supported broadcasting is in the national interest. Specifically, Congress has found that

> [b]roadcast television programming is supported by advertising revenues. Such programming is free to those who own television sets and do not require cable transmission to receive broadcast signals. There is a substantial governmental interest in promoting the continued availability of such free television

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6/ References to "digital television environment" and similar references in these Comments are to program transmitted digitally from their point of origination all the way to viewers' homes, not to digital *representations* of analog NTSC programming that can sometimes be found in the current-day NTSC television program distribution system. Nielsen's AMOL signal does pass through virtually all of the "digital" equipment used in the NTSC distribution system today.

7/ *See* Letter from Scott Roberts, Senior Economist, Mass Media Bureau, to Lawrence Laskey, Assistant General Counsel of Nielsen, (June 10, 1994) (requesting Nielsen's ratings information for use in connection with Prime Time Access Rule; territorial exclusivity requirements and signal carriage requirements).

> programming, especially for viewers who are unable to afford other means of receiving programming. . . .[8/]

Congress also has stated that

> [t]elevision broadcasters and cable television operators compete directly for the television viewing audience, programming materials, and advertising revenues. The Federal interest in ensuring that such competition is fair and operates to the benefit of consumers requires that local broadcast stations be made available on cable systems. . . .[9/]

8. The FCC separately has long recognized that ratings services provided by organizations such as Nielsen, and the transmission of SID codes in support of those services, are in the public interest because of their importance to the broadcast and cable industries. In its *VBI Report and Order* in the "*Program-Related Signals in the VBI" proceeding*,[10/] the Commission noted that "'[t]he transmission on broadcast frequencies of signals intended to be used in the rendition of a nonbroadcast automatic program identification service [is] in the public interest.'"[11/] The Commission also has stated that the use of SID codes is "essential to [a network's] efficient operation,"[12/] and that the codes and the ratings produced therefrom are "important . . . to many entities involved in producing the programs which [a] station broadcasts, and without which [a station's] viable operation, however convenient and economical, would be impossible."[13/] The Commission has found ratings services to be in the public interest because they "convey indirect benefits [to the public] by making the operation of

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8/ *See* Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, 106 Stat. 1460 (Oct. 5, 1992) (the "Cable Act").

9/ H.R. Conf. Rep. No. 862, 102d Cong., 2d Sess. (1992) at 54.

10/ *Matter of Permitting Transmission of Program-Related Signals in the Vertical Blanking Interval of the Standard Television Signal*, 43 Fed. Reg. 49331(Oct. 23, 1978).

11/ *Id.* at 49333 (quoting *Program Identification Patterns*, Docket No. 19314, 43 F.C.C. 2d 927, 944 (1973)).

12/ *TV Visual Transmissions for Program Identification, Public Notice*, 22 F.C.C. 2d 779, 780 (1970) (hereinafter cited as *TV Program Identification Public Notice*).

13/ *TV Visual Transmissions for Program Identification, Report and Order*, 22 F.C.C. 2d 536, 545 (1970) (hereinafter cited as "*TV Program Identification Report and Order*").

broadcast stations more convenient and economical, [and by] making possible a more adequate financial base for the provision of basic broadcasting service."[14/]

9. The importance of ratings extends well beyond the companies directly involved in the broadcast of television programming. Television ratings provide advertisers of all consumer products a vehicle for analyzing and selecting the most efficient and effective advertising venues; this, in turn, provides information of interest to millions of consumers, while helping keep consumer prices for these products lower as the consumer product companies pass the savings from efficient advertising on to the consumer. Additionally, manufacturers of consumer televisions and television-related equipment have a strong interest in maintaining television program ratings in a digital television environment. These ratings allow program creators to measure and respond to the viewing preferences of television audiences, which improves the quality of the programming available. This drives the popularity of television viewing in general, a factor which directly influences the purchases of consumer television equipment.

B. The Changes Required in the Commission's Proposed Rules.

10. As explained above, Congress and the Commission have repeatedly determined that ratings are an important foundation of the broadcast and cable industries and the public in general. As the Commission is aware, analog transmission methodologies generally allow only one program to be transmitted over a specified radio frequency "channel" at a specified time. In a digital transmission, however, *multiple* programs can be transmitted concurrently over a single radio frequency channel, and it therefore is not feasible to identify a specific program or specified programs being transmitted just by intercepting that stream "over the air." Rather, to identify accurately the digitally transmitted program(s) being viewed by a specified NMH at a specific time, it will be necessary for Nielsen to use unique identifying "serial numbers"

[14/] *Order* at ¶ 109.

broadcast with rated programs[15], and "read" the receipt of those numbered programs at monitored television receivers. In adopting a standard for digital television, the Commission therefore must ensure that the standard allows for the continued preparation of ratings in a new environment of digitally-transmitted programming; *i.e.*, a method for uniquely labeling and identifying each program that is transmitted. Without such a system, the long term feasibility of providing accurate television ratings may well be jeopardized.

11. In the *Notice*, the Commission proposes to adopt a digital television ("DTV") standard developed by the Advanced Television Systems Committee ("ATSC"). The ATSC DTV Standards as published consists of five components: video coding, audio coding, transport, RF/transmission and receiver. The proposal set forth in the *Notice*, however, does not contain any provisions for program identification features.

12. This should be remedied. Because of the importance of ratings to the broadcast, advertising and related industries, as well as to members of the viewing public, and because the importance of program identifications to the preparation of ratings, the Commission should require a method for the identification of DTV programs, just as it has for station identification transmitted using analog transmission technology.

13. While the exact method of transmitting program identification packets can be left to the industry to determine, the Commission should specify that all program identification packet transmission technology must have at least the following characteristics:

1) each program should be assigned a unique digital "serial number" when the program is first created or first digitized, thereby allowing identification of specific programs for ratings purposes;
2) a serial number associated with a specific program should never be re-used, so that one number is never associated with more than one program; and
3) serial number assignments should be sequential and no insertion of information into the number other than identifying information should be permitted. For

[15] While alternative ways to track programs (*e.g.*, embedding and later reading video or audio codes in the programs; passively matching programs' video and audio samples) are under development, insertion of program identification information is, long term, the only certain way to ensure that viable television viewing measurements can be made. Further, embedded codes would still have to be "read" via a physical connection to monitored receivers.

example, many serialization schemes assign certain digits to have a specific meaning (creation/manufacture date, etc.), which greatly reduces the effective size of the numbering universe. Additional information (program name, type, etc.) should be carried via separate mechanisms.

14. The ATSC Technology Group on Distribution ("T3") is currently drafting a Program/Episode/Version Identification Standard which incorporates the characteristics required to continue to provide ratings for DTV programs. The T3 Standard calls for a "Provider Index Number" to be assigned by Society of Motion Picture and Television Engineers to each major programming provider, and a "Program Event Identification Number" to be assigned by the respective programmer (or SMPTE for low-volume program producers) to each program to be transmitted digitally. The numbers associated to each respective program would be transmitted with their associated program each time the program is transmitted, and "read" at their point of reception in monitored homes.

15. As explained below, Nielsen proposes and supports the incorporation of T3's Program/Episode/Version Identification Standard into the ATSC DTV Standard. The assignment of a unique identifying number to each program under T3's proposal will permit metering activities in a digital television environment, thereby continuing the ability to provide for ratings, notwithstanding the conversion to digital transmission technologies.

III. PROGRAM IDENTIFICATION DATA MUST BE OBTAINABLE

16. Nielsen proposes one addition to the T3 Standard:

17. Program identification data included in the data stream must be obtainable or "readable" to record, and thus rate, the viewing of rated programs. Unlike the analog environment (where it can be assumed that the program being *transmitted* by a given station at a given time is, in fact, viewed in a metered home once it is established that the monitored receiver is tuned to that station's assigned "channel"), capturing digitized program identification information over-the-air or at the transmitter site would not provide relevant

information to ratings companies because that information could relate to *more than* one program being transmitted by a given station at a specific time -- not the specific program actually being viewed in the metered household.

18. There are a number of options through which digitally-transmitted program identification information can be obtained. As but one example, many digital television receivers are being designed to have external data ports that would allow consumer access to transmitted data, and thus would also allow access to program identification data. If said data port is present, access to identification data related to the *viewed* programming should be mandated, and said data should be logically distinguished from data not related to the program being viewed. If an external data port is not present, it is not inconceivable that an internal port which performs the same function could be installed, or some other approach to receiving data could be employed. None of these options would have any effect on the functionality or operation of the television set, and the viewer would not be aware of any difference in the quality of the signal being received, just as is the case today with regard to Nielsen AMOL analog transmissions.[16/] Indeed, it is important that viewing behavior remain unaffected by television audience monitoring, both in the analog environment and in the digital environment as proposed herein.

19. Nielsen proposes that receiver manufacturers be strongly encouraged by the Commission to accommodate the television audience measurement concerns raised herein in order to design the most efficient manner of granting access to the digital identification information transmitted with *displayed* programming. Nielsen believes, as explained above, that receiver manufacturers will benefit greatly by the continuing presence of an effective

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16/ The Commission recently found, in fact, that the "successful and problem-free operation of [Nielsen's AMOL system] verifies the inherently innocuous nature of [its] use." *In re: Digital Data Transmission Within the Video Portion of Television Broadcast Station Transmission, Report and Order* (rel. June 28, 1996) at Para. 11.

ratings system. Nielsen also believes that consumers are well served by the advertising efficiency gains made possible by effective television ratings, and would continue to be beneficiaries in a digital television environment. Nielsen therefore is willing to work with receiver manufacturers to develop the technology necessary to make program identification data obtainable.

IV. CONCLUSION

20. Nielsen strongly urges the Commission to adopt a mandatory program identification standard which provides access to the transmitted identifying information as set forth herein. Requiring program identification will permit Nielsen to continue to provide the most accurate ratings possible, which is consistent with the public interest and a necessary foundation of the American free television system.

WHEREFORE, Nielsen urges the Commission to adopt regulations in accordance with the opinions and arguments expressed in these Comments.

Respectfully submitted,

A.C. NIELSEN COMPANY

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July 15, 1996

CERTIFICATE OF SERVICE

I, Kimberly A. Dunmire, a secretary in the law firm of Gardner, Carton & Douglas, hereby certify that a true and correct copy of the foregoing (1) Request to Accept Late-Filed Comments and (2) Comments of A.C. Nielsen Company were sent via hand delivery, this 15th day of July, 1996, to each of the following:

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